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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,109

07/08/2003

Brian James Knight

60707-1420

7691

24504

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12/26/2007

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EXAMINER

CHAN, SAI MING

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

12/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/614,109

Applicant(s)

KNIGHT ET AL.

Examiner

Sai-Ming Chan

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Drawings***

The drawings are objected to because some of them are not legible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Priem et al. (U.S. Patent # 6282587)**, in view of **Quigley et al. (U.S. Patent #6650624)**, and in view of **Radko (U.S. Patent # 5687392)**, and further in view of **Beshai et al (U.S. Patent Publication # 20040213291)**.

Consider **claims 1, 3, 5, 6, 7, 9, 10, 11, 12 and 13**, Priem et al. clearly disclose and show a method for transferring network packet data stored in memory to an output device (fig. 1 (DMA->FIFO->I/O device), abstract), the method comprising the steps of: storing the first sequence of packet data octets in a FIFO buffer (fig. 1 (FIFO), column 2, lines 1-9) operably connected to the output device (fig. 1 (I/O device)).

However, Priem et al. do not specifically disclose storing the data that meets the length requirement.

In addition, Quigley et al. clearly disclose when the octet length of the sequence of packet data octets is equal to the octet length of a data word (column 1, lines 63-67, column 2, lines 1-7 (transmit segment no larger than granted); fig. 71, column 66, lines 55-67 (concatenation of number of segments)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to transfer packet data stored in memory to output device, as taught by Priem et al., and demonstrate the storage of data, as taught by Quigley et al., so that data storage is done efficiently.

However, Priem et al., as modified by Quigley et al., do not specifically disclose alignment register.

In the same field of endeavor, Radko clearly discloses and shows an alignment register (fig. 3, dynamically allocated DMA transfer Buffer (387)) and the storing of packet sequence which is longer than the data word (column 7, lines 58-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to transfer packet data stored in memory to output device, as taught by Priem et al., store data at required length, as taught by Quigley et al., and demonstrate the alignment register, as taught by Radko; thereby enable the storing of data packets of variable lengths in the FIFO registers.

However, Priem et al, as modified by Quigley et al. and Radko, fail to show the concatenation of packets of less than required length. Furthermore, Beshi et al. clearly show the concatenating of one or more packet data octets (fig.1, lines 1- 6) from at least a first data word having at least one packet data octet (fig. 1 (100)) to be included in a network packet to generate a first sequence of packet data octets (fig. 1 (112)) having an octet length at least as great as an octet length of a data word;

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to transfer packet data stored in memory to output device, as taught by Priem et al., store data at dataword length, as taught by Quigley et al., demonstrate the alignment register, as taught by Radko; and concatenate data less than dataword length, as taught by Beshi et al., so that concatenated data packets of equal length can be stored in the FIFO registers.

Consider **claim 2**, and **as applied to claim 1 above**, Priem et al., as modified by Radko, and modified by Beshi et al., and further modified by Saito, clearly disclose and show a method as described.

However, Priem et al., as modified by Radko, and modified by Beshi et al., and further modified by Saito, do not specifically show the alignment register.

In the same field of endeavor, Radko clearly show and disclose the step of storing the first sequence of packet data octets in the alignment register (Radko: inherently taught in fig. 3, dynamically allocated DMA transfer Buffer (387)) when the octet length of the first sequence of packet data octets is less than the octet length of a data word (Radko: inherently taught in column 7, lines 58-61).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to store the data in a temporary place if the data sequence is less than a data word.

Consider **claims 4 and 8**, and **as applied to claim 1 and 5, respectively, above**, Priem et al., as modified by Radko, and modified by Beshi et al., and further modified by Saito, clearly disclose and show the method as described except the step of the octet length of a data word is an integer multiple of four.

In the same field of endeavor, Beshi et al. clearly shows and discloses that the data word's octet length could be an integer multiple of four (inherently taught in

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paragraph 52, lines 1-5 (a word could be four octets)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to create the octet length of a data word in an integer multiple of four.

### ***Response to Arguments***

This action is in response to Applicant's amendment filed on 8/31/2007. Claims 1-13 are now pending in the present application. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection. See the above rejections of claims 1-13 for the relevant interpretation and citations found in Quigley et al., disclosing the newly added limitations.

### ***Conclusion***

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sai-Ming Chan whose telephone number is 571-270-1769. The examiner can normally be reached on monday - Friday 8:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

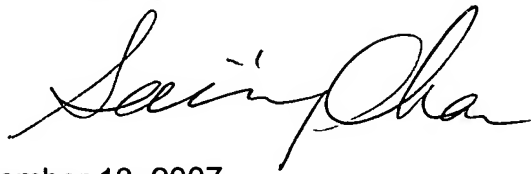
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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December 18, 2007

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